



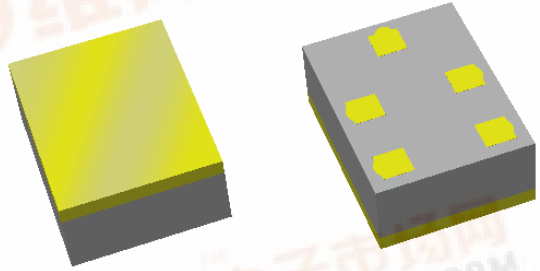
# Part Number 856326

# 1575.42 MHz SAW Filter

## Preliminary Data Sheet

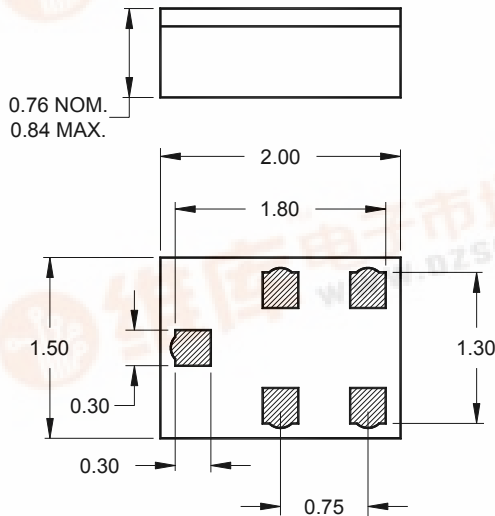
### Features

- For GPS applications
- Usable bandwidth 2 MHz
- 0.53 dB typical insertion loss
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Chip Scale Package (CSP)
- Ceramic surface mount package
- Hermetic



### Package

Surface Mount 2.00 x 1.50 x 0.76 mm

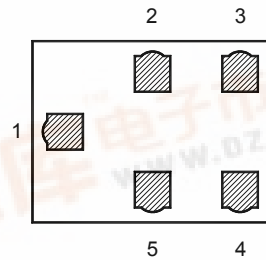


Dimensions shown are nominal in millimeters  
All tolerances are ±0.10mm

Body:  $Al_2O_3$  ceramic  
Lid: Kovar or Alloy 42, Au over Ni plated  
Terminations: Au plating 0.5 - 1.0µm,  
over a 2 - 6µm Ni plating

### Pin Configuration

Bottom View



Pin No.	Description
1	Output
4	Input
3	Ground
2,5	Case ground



# Preliminary Data Sheet

## Electrical Specifications <sup>(1)</sup>

Operating Temperature Range: <sup>(2)</sup> -30 to +85 °C

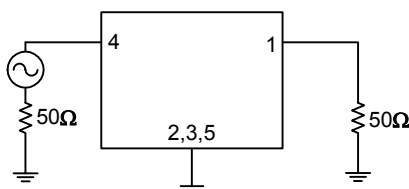
Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
<b>Center Frequency</b>	-	1575.42	-	MHz
<b>Maximum Insertion Loss</b> <sup>(4)</sup> 1574.42 - 1576.42 MHz	-	0.53	0.8	dB
<b>Amplitude Ripple</b> 1574.42 - 1576.42 MHz	-	0.02	0.3	dB p-p
<b>Absolute Attenuation</b>				
500 - 680 MHz	14.5	16.5	-	dB
680 - 894 MHz	13.5	15.5	-	dB
894 - 1500 MHz	13.5	15.2	-	dB
1650 - 2800 MHz	14.5	16.5	-	dB
2800 - 4000 MHz	16	19.8	-	dB
4000 - 4250 MHz	15	25.9	-	dB
4250 - 5250 MHz	14	26.4	-	dB
5250 - 6000 MHz	15	23.5	-	dB
<b>Input/Output VSWR</b> <sup>(4)</sup> 1574.42 - 1576.42 MHz	-	1.2	1.5	-
<b>Source Impedance</b> <sup>(5)</sup>	-	50	-	Ω
<b>Load Impedance</b> <sup>(5)</sup>	-	50	-	Ω

### Notes:

1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. Excluding losses due to PCB
5. This is the optimum impedance in order to achieve the performance shown

### Test Circuit:

50 Ω  
Single-ended

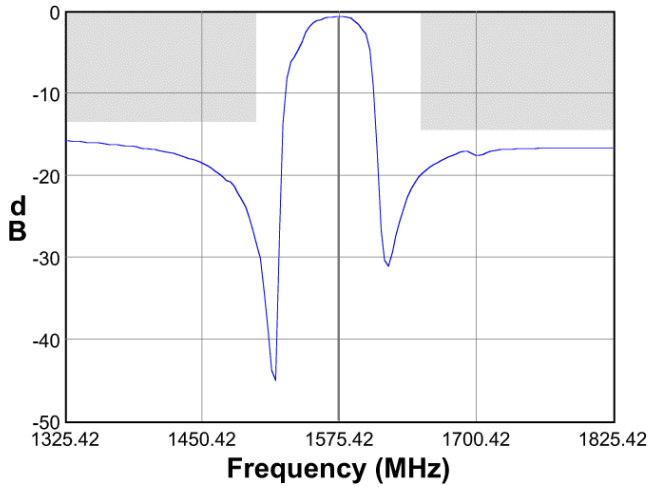


No impedance matching  
required

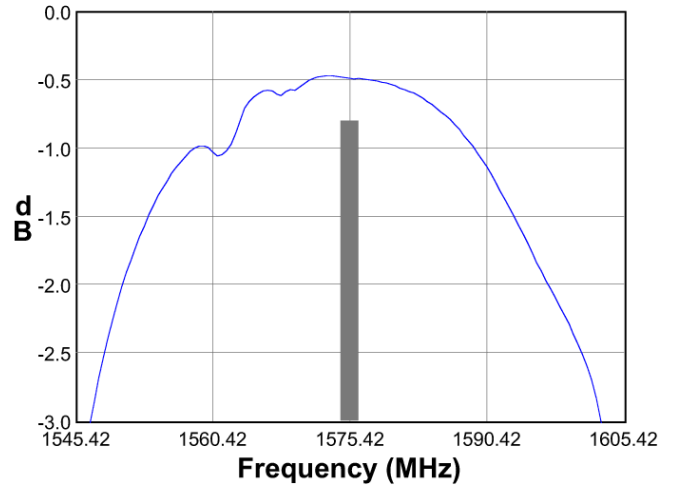
**Preliminary Data Sheet**

**Typical Performance (at +25°C)**

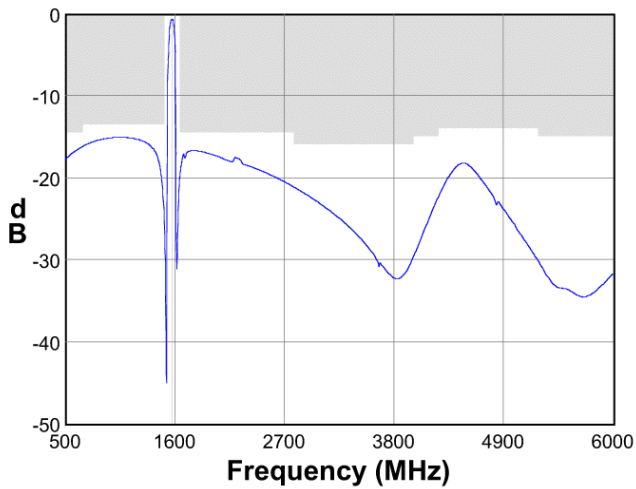
**Frequency Response**



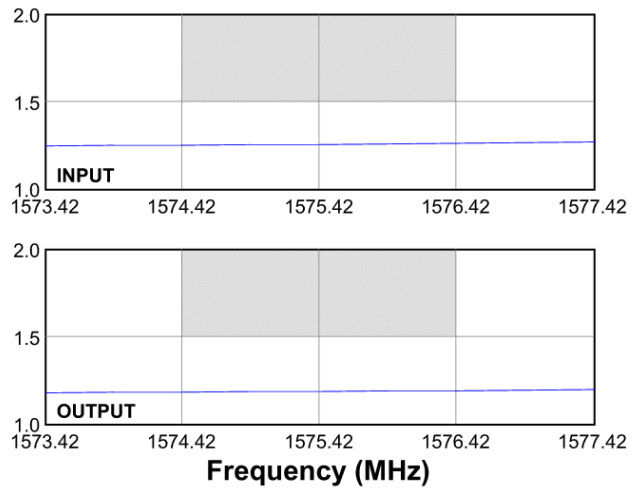
**Passband Response**



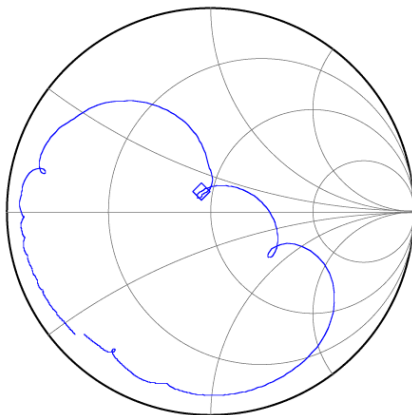
**Wideband Response**



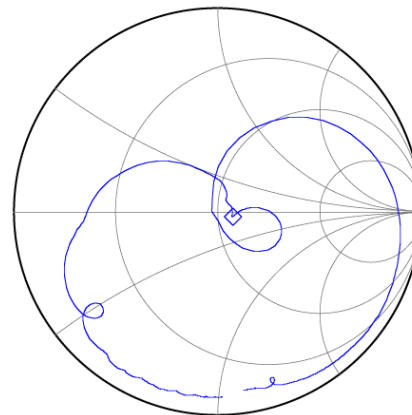
**Input/Output VSWR**



**Input Smith Chart**



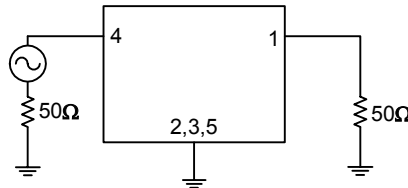
**Output Smith Chart**



**Preliminary Data Sheet**

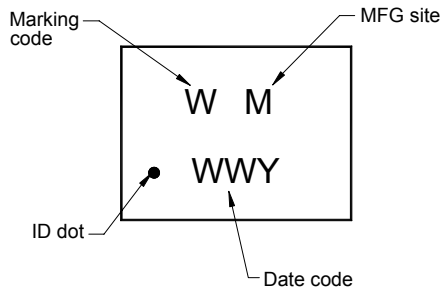
**Matching Schematics**

50 Ω  
Single-ended

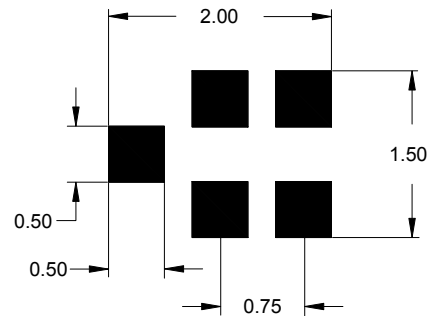


No impedance matching required

**Marking** **PCB Footprint**

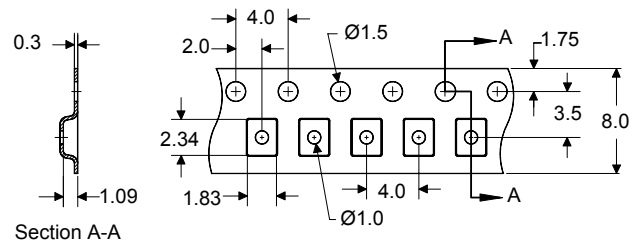
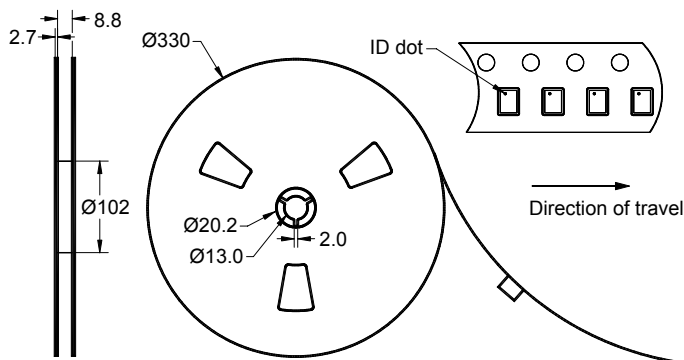


The date code consists of: WW = 2 digit week,  
Y = last digit of year, M = manufacturing site code



This footprint represents a recommendation only  
Dimensions shown are nominal in millimeters

**Tape and Reel**




Dimensions shown are nominal in millimeters  
Packaging quantity: 10000 units/reel

# Preliminary Data Sheet

## Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-30	+85	°C
Storage Temperature Range	T <sub>stg</sub>	-40	+85	°C

### Warnings

- Electrostatic Sensitive Device (ESD) 
- Avoid ultrasonic exposure

## Links to Additional Technical Information

[PCB Layout Tips](#)

[Qualification Flowchart](#)

[Soldering Profile](#)

[S-Parameters](#)

[Other Technical Information](#)

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